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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT

PAPER NUMBER

2627

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/584,686	Applicant(s) MAHR ET AL.	
	Examiner Peter Vincent Agustin	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12 and 14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 12 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This application is a national stage entry (371) of PCT/EP04/13506, filed November 26, 2004.
2. Claims 1-9, 12 & 14 are currently pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9, 12 & 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al. (US 5,212,677) in view of Kagami et al. (US 5,199,017).

In regard to claim 1, Shimote et al. disclose a method for analyzing an abnormal region on an optical recording medium (see title), including the steps of: detecting a change from a normal to an abnormal region (see Figures 7 & 9); in response to the detecting step, *moving to the next track until a normal region is reached* (column 5, lines 56-65); obtaining information on the type of abnormal region (Figure 8: “defect size/type data”); determining the radial extension of the abnormal region perpendicular to the track direction (patent claim 1: “dimensions of the defect cluster in radial and circumferential directions”); and determining the type of the abnormal region based on the information obtained (Figure 8: “defect size/type data”).

However, Shimote et al. do not disclose: in regard to claim 1, making a jump perpendicular to the track direction.

Kagami et al. disclose: in regard to claim 1, making a jump perpendicular to the track direction (see Figure 4) when counting the number of tracks. Kagami et al. disclose that this arrangement has the advantage of precisely counting the number of tracks even if a defect portion or a pre-pitted portion which causes noise is present on the recording surface of an optical disk, or if noise is caused by other sources (see column 1, line 66 through column 2, line 2). This is in comparison with the arrangement in Figure 15 (prior art), wherein the number of tracks is counted while seeking in the tracking direction, which arrangement is more susceptible to errors in counting (see column 1, lines 48-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have applied this teaching of Kagami et al. to the method of Shimote et al., the motivation being to precisely count the number of tracks regardless of the presence of defects or external noise.

In regard to claim 2, Shimote et al. disclose that the step of determining the type of the abnormal region further includes: differentiating between a first group of types and a second group of types of abnormal region based on the obtained information (see Figure 15).

In regard to claim 3, Shimote et al. disclose that the step of obtaining information on the type of abnormal region includes evaluating a data signal and/or a track crossing signal obtained from the optical recording medium (column 4, lines 21-22: “defects are detected by means of the reproduction signals”).

In regard to claim 4, Shimote et al. disclose that the step of measuring the radial extension of the abnormal region includes measuring the time needed for jumping over the abnormal region (column 6, line 47: “length of each drop-out pulse”).

In regard to claim 5, Shimote et al. disclose jumping back to the start of the abnormal region; reading data stored in the abnormal region; and evaluating the data for determining the type of abnormal region (see Figure 18).

In regard to claim 6, Shimote et al. disclose that the step of evaluating the data for determining the type of abnormal region includes evaluating a sync signal included in the data (Figure 9: “sync/resync error”).

In regard to claim 7, Shimote et al. disclose that the step of measuring the radial extension of the abnormal region includes counting the number of wrong syncs in the abnormal region (Figure 9: “sync/resync error”).

In regard to claim 9, Shimote et al. disclose that the types of abnormal region include at least one of a groove region, a mirror region, a defect region, a wrong bitrate region and a wrong structure region (see title).

In regard to claim 12, Shimote et al. disclose that the step of differentiating between a first group of types and a second group of types of abnormal region based on the obtained information includes: classifying an abnormal region as belonging to the first group of types if an evaluation of the abnormal region does only take a short time compared with the evaluation of the abnormal region in the second group of types; and otherwise classifying an abnormal region as belonging to the second group of types (column 6, line 47: “length of each drop-out pulse”).

In regard to claim 14, Shimote et al. disclose the steps of: differentiating between a first group of types and a second group of types of abnormal region based on the obtained information (see Figure 15), wherein an abnormal region is classified as belonging to the first group of types if the abnormalities of the detected signal are caused by physical characteristics of

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the recording medium (user area defect); and wherein an abnormal region is classified as belonging to the second group of types if the abnormalities of the detected signal are caused by erroneous data (data error).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimote et al. & Kagami et al. as applied to claim 1 above, and further in view of Mitarai (JP 54048213 A).

For a description of Shimote et al. & Kagami et al., see the rejection above. However, Shimote et al. & Kagami et al. do not disclose: in regard to claim 8, a step of storing the position, the radial extension and/or the type of the abnormal region on the optical recording medium.

Mitarai discloses: in regard to claim 8, storing the position and the radial extension of an abnormal region of an optical recording medium (abstract: “stores the presence or not, quantity, length, position, etc. of the defect areas”).

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied these teachings of Mitarai to the method of Shimote et al. & Kagami et al., the motivation being to improve the utilization efficiency of the optical recording medium and to simplify design (see purpose).

Response to Arguments

6. Applicant's arguments regarding the Kühn et al. reference have been fully considered and are persuasive. Therefore, the rejections based on Kühn et al. have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shimote et al. (US 5,212,677) and Kagami et al. (US 5,199,017).

Citation of Relevant Prior Art

7. Oh (US 7,457,212) is considered pertinent to applicant's disclosure of differentiating between two different types of defects (see Figure 1, which differentiates between a black dot, a scratch, and a fingerprint).

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Vincent Agustin whose telephone number is (571) 272-7567. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter Vincent Agustin/
Patent Examiner, Art Unit 2627